

**Before the  
Federal Communications Commission  
Washington DC 20554**

In the Matter of	)	
	)	
Inquiry Concerning the Deployment of	)	
Advanced Telecommunications	)	
Capability to All Americans in a Reasonable	)	GN Docket No. 07-45
and Timely Fashion, and Possible Steps	)	
to Accelerate Such Deployment	)	
Pursuant to Section 706 of the	)	
Telecommunications Act of 1996	)	

**COMMENTS OF THE  
TELECOMMUNICATIONS INDUSTRY ASSOCIATION**

The Telecommunications Industry Association (TIA) hereby submits comments to the Federal Communications Commission (FCC or Commission) in response to the Notice of Inquiry (NOI) in the above-captioned proceeding.<sup>1</sup> This NOI is the FCC’s fifth inquiry under Section 706 of the Telecommunications Act of 1996 (the Telecom Act) into “whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.”<sup>2</sup> TIA, on behalf of its members companies, has a vested interest in the advancement of broadband deployment and respectfully offers these comments in an effort to work with the Commission to meet that end.

TIA is a leading trade association for the information and communications technology industry, with 600 member companies that manufacture or supply the products and services used to provide or access broadband-enabled services.

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<sup>1</sup> *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, Notice of Inquiry, GN Docket No. 07-45 (rel. April 16, 2007)(*NOI*).

## I. INTRODUCTION

In the last several years, the Commission has taken progressive measures to ensure that its directive in Section 706 of the Telecom Act is recognized. For example, our industry has been positively impacted by the Commission's decision in its *Triennial Review Order* to eliminate most unbundling requirements for broadband architectures serving the mass market, making it easier for companies to invest in equipment and deploy high-speed Internet services.<sup>3</sup> Consistent with this monumental deregulatory action, the FCC later classified broadband Internet access services provided over cable modem, wireline, broadband over powerline (BPL), and most recently wireless, as "information services" under the Act.<sup>4</sup> Additionally, the information and communications technology industry will certainly benefit from the auction of newly available spectrum in the 700 MHz band, and the exploration of additional ways to make the most efficient use of this spectrum.

As a result of these measures, broadband deployment has been on the rise<sup>5</sup> and market-based solutions have led to increased investment in broadband infrastructure and broadband-related products and services. As a result, TIA continues to support the "light-touch" regulatory

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<sup>2</sup> § 706(b) of the Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56 (1996) (1996 Act), reproduced in the notes under 47 U.S.C. § 157.

<sup>3</sup> *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01-338, 96-98, 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd 16978, 17145, para. 278 (2003) (*Triennial Review Order*), corrected by Errata, 18 FCC Rcd 19020 (2003) (*Triennial Review Order Errata*), vacated and remanded in part, affirmed in part, *United States Telecom Ass'n v. FCC*, 359 F.3d 554 (D.C. Cir. 2004) (*USTA II*) cert. denied, 125 S.Ct. 313, 316, 345 (2004).

<sup>4</sup> The Communications Act defines "information service" as "the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications." 47 U.S.C. 153(20). The Communications Act defines "telecommunications" as the "transmission between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." 47 U.S.C. 153(43). The Act defines telecommunications service as "the offering of telecommunications for a fee directly to the public." 47 U.S.C. 153(46).

approach as the most critical public policy principle necessary to the deployment of next-generation broadband networks, as well as the continued innovation in bandwidth-intensive applications that will spur broadband demand. Broadband infrastructure deployment and broadband demand are equal partners in any broadband market, and public policy intended to promote the broadband market must embrace both.

Notwithstanding these advancements, and in light of generic statistical information suggesting that the United States continues to “fall behind” other nations in the area of broadband deployment in terms of penetration and bandwidth,<sup>6</sup> questions remain as to whether domestic communications policy is structured to ensure that the United States leads in the broadband market.<sup>7</sup>

In such an environment, where the results of the Commission’s inquiry may reinforce the notion that the United States is lagging behind other countries in broadband penetration and that regulatory action is necessary, TIA cautions the Commission against deviating from its current “hands off” approach. Instead, the Commission should view Section 706 as a goal rather than a date certain for the deployment of broadband to all Americans. Section 706 establishes a statutory policy through which the Commission must continually assess the broadband market to ensure it is progressing and striving to achieve, albeit fairly undefined, “broadband” penetration. Through this continual assessment, the Commission can focus its efforts on fostering the

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<sup>5</sup> See, e.g., *TIA’s 2007 Telecommunications Market Review and Forecast*, copyright 2007, broadband subscribership passed dial-up in 2005 and by 2010 broadband will account for 87% of all Internet subscriptions. The number of broadband subscribers increased from fewer than 5 million in 2000 to nearly 57 million in 2006.

<sup>6</sup> OECD Broadband Statistics to December 2006 at [http://www.oecd.org/document/7/0,2340,en\\_2649\\_34223\\_38446855\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/7/0,2340,en_2649_34223_38446855_1_1_1_1,00.html).

<sup>7</sup> See, e.g., *Digital Future of the United States: Part IV, Broadband Lessons From Abroad: Hearing before the Subcomm. on Telecommunications and the Internet, House Comm. Energy and Commerce*, available at [http://energycommerce.house.gov/cmte\\_mtgs/110-ti-hrg.042407.dig.future.partIV.shtml](http://energycommerce.house.gov/cmte_mtgs/110-ti-hrg.042407.dig.future.partIV.shtml).

deployment of current and next-generation technologies, rather than allowing transient rankings to detract from its efforts in this area.

Moreover, in light of the function of Section 706 and the ongoing debate over the performance of the U.S. market compared to other nations, TIA recommends that the Commission not limit itself to one narrow and relatively arbitrary definition of “advanced telecommunications capability,” nor should it limit the other components of its review to considerations based on such a definition. Instead, the Commission should recognize all technologies playing an important role in our broadband market, and the capabilities they promote. Such a tiered analysis will allow the Commission to compare our progress to our own prior benchmarks instead of those of other countries. The United States should remain its own largest competitor.

## **II. MEASUREMENTS THAT HELP DEFINE “ADVANCED TELECOMMUNICATIONS CAPABILITY” SHOULD TAKE INTO ACCOUNT CURRENT AND FUTURE TECHNOLOGIES**

TIA supports a definition of “advanced telecommunications capability” as described in Section 706 (c)(1) of the Communications Act of 1934, as amended. It states: “The term ‘advanced telecommunications capability’ is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.”

### **a. A definition of “advanced telecommunications capability” must include two-way transmission capability.**

It is clear from the definition in Section 706 (c)(1) that Congress intended that advanced telecommunications capability must be robust; interactive, by reference to the words “originate and receive”; and full service, by reference to the words “voice, data, graphics, and video.”

This definition does not, however, contemplate one-way transmission. Again, the statute specifically refers to a capability that enables users to “originate and receive” information. This is not to suggest that such two-way transmission be symmetric, but it must allow for more than a minimal capability to transmit information. In fact, we are already seeing increasingly robust upstream capabilities being offered to consumers with the proliferation of consumer-created and driven video content available on the Internet.<sup>8</sup>

TIA also believes that in this particular inquiry, and under the language of Section 706, the definition of advanced telecommunications capability should be based on an assessment of the broadband market which is flexible and evolving, yet takes into account broadband technologies currently available and widely embraced by the public. Section 706 is a policy intended to elevate the communications marketplace from its status in 1996, through the advanced capabilities of today and the technologies anticipated in the future.

**b. Because broadband speeds vary by technology, a “minimum” broadband speed should be set separately for wireless versus wireline technology.**

Our nation’s consumers have access to a wide variety of competing broadband technologies, such as DSL, cable modem, mobile (2.5 and 3G), or satellite, all of which are available at numerous price points and capabilities. Certainly, TIA agrees that 200 kilobits per second (kbps) is hardly broadband *today*, as many technologies greatly exceed this speed. Despite the Commission’s definition of broadband as 200 kbps, its deregulatory policies have spurred billions of dollars in investment and the availability of better broadband services. So, even though 200 kbps may not be an appropriate definition of broadband in today’s market, it is important to note that the definition itself has done nothing to impede innovation.

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<sup>8</sup> See, generally, Verizon FiOS Internet access speeds at <http://www22.verizon.com/content/consumerfios/packages+and+prices/packages+and+prices.htm>. See also: [www.youtube.com](http://www.youtube.com).

While broadband continues to be offered at increasingly faster speeds and for some applications speeds as high as several megabits per second are necessary, it remains the case that in many circumstances speeds as low as 200 kbps may be appropriate. In particular, a direct comparison of wireline broadband services to wireless broadband services is inappropriate. Spectrum is shared, it must be carefully managed, and mobile handoffs are technologically challenging – making it more difficult to attain higher speeds. Yet, wireless broadband provides critical resources to businesses and residential consumers. Thus, maintaining a minimum transfer rate of 200 kbps for wireless technologies would be appropriate.

However, wireline technologies (DSL, cable modem, FTTx) can operate at transfer rates substantially in excess of 200 kbps. They are all capable of transmitting an HDTV signal, as well as voice and data. So, it is appropriate to set the minimum transfer rate for wireline technologies at the minimal level necessary to transmit an HDTV signal.<sup>9</sup>

These higher transfer rates reflect the fact that most wireline broadband users today purchase services at a rate far above the current 200 kbps minimum used by the Commission. As noted by Commissioner McDowell in recent remarks, “more than 50 million of the 64.6 million broadband lines in service across the America exceed 200 kbps in both directions... and over 63 percent of those lines have transfer rates in the faster direction of 2.5 Mbps or greater.”<sup>10</sup> With the continued collection of this type of information, the Commission can reevaluate its current definition of broadband.

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<sup>9</sup> For wireline technologies, an HDTV channel can be transmitted at 6 Mbps utilizing MPEG-4 compression.

<sup>10</sup> *High-Speed Services for Internet Access: Status as of June 30, 2006*, FCC Industry Analysis and Technology Division, Wireline Competition Bureau (Jan. 2007), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-270128A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-270128A1.doc). See also, *Remarks of FCC Commissioner Robert McDowell*, Catholic University School of Law Symposium (March 15, 2007), at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-271555A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-271555A1.doc).

Many communications technologies available today, and in various stages of development, provide critical resources to businesses and residential consumers. The Commission, of course, should continue to encourage the deployment of all technologies.

Included in the Commission's January report on Internet access,<sup>11</sup> is a set of "tiers" of broadband divided by technologies and the transmission speeds made possible by them, attached as Appendix A. TIA recommends that the Commission, for purposes of assessment, use these tiers to identify what is available to the consuming public and the kinds of capabilities the tiers enable.

The Commission, of course, should continue to encourage the deployment of all tiers of broadband. Further, the Commission should continually reassess these tiers and revise them and its definition of broadband as necessary so that it is consistent with broadband communications generally available to the public at that time, as well as an indicator of the kinds of future capabilities we as a nation should strive to make available.

### **III. THE COMMISSION SHOULD COLLECT ADDITIONAL INFORMATION IN AN EFFORT TO DETERMINE THE AVAILABILITY OF "ADVANCED TELECOMMUNICATIONS CAPABILITY"**

After the Commission revisits its definition of "advanced telecommunications capability," it is clear that the Commission cannot make an assessment on speed/bandwidth alone in determining whether advanced telecommunications capability is "being deployed to all Americans in a reasonable and timely fashion."<sup>12</sup> Yet the spirit of Section 706 requires the Commission to take action so that such an assessment can be made, and TIA encourages the Commission to do so.

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<sup>11</sup> *High-Speed Services for Internet Access: Status as of June 30, 2006*, FCC Industry Analysis and Technology Division, Wireline Competition Bureau (Jan. 2007), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-270128A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-270128A1.doc).

The Commission must continue to monitor the marketplace in order to make this determination. TIA urges that the Commission, in continuing to monitor the marketplace, require full disclosure of broadband capabilities. Full disclosure should include, but not be limited to: availability of, and subscriptions to, broadband by location, speed/bandwidth capability offered, at what price, and any other information the Commission deems relevant and helpful to determining whether “advanced telecommunications capability” is being deployed to all Americans in a reasonable and timely fashion.

**IV. THE COMMISSION CURRENTLY HAS THE ABILITY TO FACILITATE THE DEPLOYMENT OF “ADVANCED TELECOMMUNICATIONS CAPABILITY” TO ALL AMERICANS IN A REASONABLE AND TIMELY MANNER.**

TIA has long-urged that public policies should foster a climate conducive to innovation and investment, including a non-invasive regulatory regime. The constant goal must be to achieve a market-based policy framework that fosters investment in network facilities and competition in the provision of converged, multimedia services and applications.

In areas where the market is not as responsive as desirable, the Commission currently has numerous proceedings open in which it can take the necessary actions to facilitate increased broadband deployment. For example, TIA commends the Commission for initiating both a Notice of Proposed Rulemaking in the matter of broadband data collection<sup>13</sup> and a Notice of Inquiry in the matter of broadband industry practices.<sup>14</sup>

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<sup>12</sup> § 706(b) of the Telecommunications Act of 1996, Pub. L. 104-104, 110 Stat. 56 (1996) (1996 Act), reproduced in the notes under 47 U.S.C. § 157.

<sup>13</sup> *In the Matter of “Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol,”*, Notice of Proposed Rulemaking, WC Docket No. 07-38 (rel. April 16, 2007).

<sup>14</sup> *In the Matter of “Broadband Industry Practices,”* Notice of Inquiry, WC Docket No. 07-52 (rel. April 16, 2007).

Additionally, the U.S. Federal-State Joint Board on Universal Service (Joint Board) recently advised the Commission to transition universal service toward broadband,<sup>15</sup> a recommendation that TIA wholeheartedly supports. The Commission is also planning to auction commercial spectrum in the 700 MHz band, allowing for the deployment of advanced wireless services in the near future, which will result in increased broadband deployment and availability.

**a. The Commission can facilitate broadband deployment through better information, even in the absence of explicit authority to act.**

TIA also encourages the Commission to broaden its view of the broadband market to include various public policies that may not be implemented in the United States, but which have been embraced in other nations. Even though the Commission may not have the explicit authority to enact some of these policies, the Commission can, at the very least, form a more robust picture of modern broadband markets by simply identifying these policies.

While some policy makers and stakeholders may seek to use a comparison of the U.S. market to foreign markets as a means of pursuing their own pro-regulatory policy preferences, the Commission should consider non-regulatory aspects of broadband deployment that have far greater impact on what is deployed, where it is deployed, and consumer interest in taking advantage of broadband Internet access. Policy makers and industry may continue their decade-long debate over the value of unbundling in the broadband space; however, all sides must consider that the governments of nations currently surpassing the United States in the OECD rankings are far more proactive in encouraging broadband adoption by stimulating demand for broadband services. Further, these governments have been more proactive in support of *private sector* innovation, notwithstanding their own regulatory policies.

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<sup>15</sup> *In the Matter of High-Cost Universal Support, Federal-State Joint Board on Universal Service*, Notice of Proposed Rulemaking, WC Docket No. 05-337, CC Docket No. 96-45 (rel. May 14, 2007).

Such proactive encouragement of broadband deployment in the public and private sectors is occurring in South Korea, a country that has been demarcated as leading the United States in this space. The South Korean government has been a leader in encouraging broadband infrastructure deployment through deregulatory initiatives, and has been equally focused on driving consumer demand (public and private sector) for broadband capabilities. For example, the government of South Korea set and achieved the goal of educating 10 million Koreans via the Internet.<sup>16</sup> Non-regulatory social policies such as online education can spur demand for faster broadband connections and lead to additional infrastructure investment necessary in response to such demand. The Korean government also has established Information Education Centers at post offices and schools and operates mobile educational facilities that include PCs and instructors.<sup>17</sup> Korea's government has invested in the private sector by supporting public sector use of broadband, supporting R&D, making infrastructure loans available, monitoring deployment and competitive offerings and making such information available to consumers.<sup>18</sup> All of these factors are critical when drawing a comparison between the U.S. market and others, and are as important, if not more so, than simply focusing on the speed/bandwidth available today.

Similarly, the Japanese government has implemented national broadband policies, such as e-Japan and u-Japan, both of which have been instrumental in the deployment of next-generation broadband networks in Japan. E-Japan was a national broadband strategy intended to

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<sup>16</sup> See Korea Ministry of Information and Communications, Broadband IT Korea, "Broadband Internet Service: Korea's Experience," Nae-Chan Lee, Ph.D, February 2002 (Lee) at 8, found at <http://eng.mic.go.kr/eng/index.jsp>; See Asia/Pacific Research Center, Stanford University, "The Growth of Broadband Internet Connections in South Korea: Contributing Factors," by Kyounglim Yun, Heejin Lee, and So-Hye Lim, September 2002 (Yun) at 16, found at [http://ksp.stanford.edu/publications/growth\\_of\\_broadband\\_internet\\_connections\\_in\\_south\\_korea\\_contributing\\_factors\\_the/](http://ksp.stanford.edu/publications/growth_of_broadband_internet_connections_in_south_korea_contributing_factors_the/).

<sup>17</sup> Yun at 8.

<sup>18</sup> Lee at 8; Yun at 10, 15-17.

strengthen Japan's role in the IT sector, which was determined to be lacking when broadband first emerged as a consumer service. E-Japan included a host of non-regulatory programs intended to drive broadband deployment through government encouragement of broadband demand, including e-learning and digital arts and entertainment initiatives, with a particular focus on encouraging e-commerce and e-government as a means of driving broadband deployment.<sup>19</sup>

Following the successful implementation of e-Japan, the Japanese government began to focus on ensuring the Japanese could access IT anywhere at anytime, in its new u-Japan (universal) initiative. This new policy focuses on encouraging wireline-wireless convergence through continued efforts to spur demand, such as e-government and e-commerce programs, making consumers more comfortable with broadband technology by promoting e-security, and promoting broadband as a solution to societal challenges (*e.g.*, aging, learning, and health care).<sup>20</sup> U-Japan also includes economic incentives intended to reduce the risks of investing in next-generation networks, including 0% interest loans for investments in infrastructure, as well as favorable tax policies designed to encourage such investment.<sup>21</sup>

In essence, there are many non-regulatory policies being employed by other nations to drive infrastructure investment and demand for broadband services. While the United States, under the Commission's leadership, has led the world in recognizing that the emergence of inter-platform competition is a healthier and preferred means of creating a competitive broadband marketplace, and while we have witnessed some incremental policies that attempt to spur broadband deployment in unserved areas, our nation has yet to embrace a comprehensive

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<sup>19</sup> e-Japan Strategy at [http://www.kantei.go.jp/foreign/it/network/0122full\\_e.html](http://www.kantei.go.jp/foreign/it/network/0122full_e.html)

<sup>20</sup> u-Japan Strategy at [http://www.soumu.go.jp/menu\\_02/ict/u-japan\\_en/index.html](http://www.soumu.go.jp/menu_02/ict/u-japan_en/index.html)

<sup>21</sup> See, generally, Educause Policy Conference 2006, "Evolving Broadband Market and Policy Developments in Japan," Taka Ebihara, Japan Chair, Center for Strategic and International Studies, pg 13-14.

national broadband policy that focuses on the social and economic elements of broadband deployment.

Certainly, the Commission can revise a regulatory definition of broadband, but this inquiry is merely an information gathering tool. It alone can neither create a national interest in implementing new policies that promote next-generation broadband deployment, nor honor the increasingly robust facilities-based competition in our broadband market between telephone, cable and wireless platforms, ongoing deployment of next generation networks<sup>22</sup> and innovation at the network's edge in terms of new content, applications and services.

When assessing whether Section 706's goal is being achieved, the Commission must also consider the questions that were not explicitly asked in this proceeding, such as the kinds of policies absent from the U.S. market that can promote broadband demand, and in turn drive private sector investment in infrastructure.

## **V. CONCLUSION**

The Commission has already taken steps in furtherance of its directive in Section 706 of the Telecom Act to deploy broadband to all Americans in a reasonable and timely fashion. In continuing to monitor the broadband marketplace and determine what further action may or may not be appropriate, TIA encourages the Commission to take into account currently available and anticipated technologies, including the different transmission speeds that each offer to facilitate services demanded by consumers today and in the future. TIA also believes the Commission should collect additional information for purposes of the above assessment. Lastly, TIA believes the Commission currently has the ability to promote next-generation broadband deployment and

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<sup>22</sup> "AT&T Says Costs Rise For TV System's Launch," Dione Searcey and Peter Grant, The Wall Street Journal, May 8, 2007, page B4.; Verizon's Fiber-based services are currently available in 16 states, see <http://newscenter.verizon.com/press-releases/verizon/2007/verizon-service-packages-help.html>.

heighten the demand for broadband-enabled products and services. TIA commends the Commission for initiating this inquiry.

Respectfully submitted,

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May 16, 2007

## APPENDIX A

**Table 5**  
**High-Speed Lines by Information Transfer Rates**<sup>1</sup>  
 As of June 30, 2006

Technology <sup>2</sup>	Exceeding 200 kbps in only one direction	Exceeding 200 kbps in both directions, and:				
		Greater than 200 kbps and less than 2.5 mbps in the faster direction	Greater than or equal to 2.5 mbps and less than 10 mbps in the faster direction	Greater than or equal to 10 mbps and less than 25 mbps in the faster direction	Greater than or equal to 25 mbps and less than 100 mbps in the faster direction	Greater than or equal to 100 mbps in the faster direction
ADSL	4,273,080	12,176,742	6,111,807	11,255	*	*
SDSL	826	327,370	9,223	11	*	*
Traditional Wireline	434	583,221	10,363	891	12,270	3,543
Cable Modem	292,937	3,053,382	23,039,748	2,099,654	27,779	0
Fiber <sup>3</sup>	1,093	221,227	315,266	133,339	15,778	13,380
Satellite	467,876	*	*	0	0	0
Fixed Wireless	27,904	313,011	17,220	2,580	207	54
Mobile Wireless	9,102,064	*	*	0	0	0
Power Line and Other	0	*	*	0	0	0
Total Lines	14,166,213	18,618,973	29,506,209	2,247,730	57,101	18,044

**Source:** *High-Speed Services for Internet Access: Status as of June 30, 2006*, FCC Industry Analysis and Technology Division, Wireline Competition Bureau (Jan. 2007).